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FOREST PLANTING LEAFLET.

BLACK CHERRY (*Prunus serotina*).

FORM AND SIZE.

When forest grown, the black cherry has a long, slender trunk surmounted by a comparatively small, open crown, composed of large, irregular branches. The trunk is often free from branches for a distance of 70 feet. When grown in the open, the crown becomes more spreading, but seldom massive like that of the oaks and chestnut. The tree varies greatly in size, depending on the region and locality in which it grows. In New England it is of medium size, from 30 to 50 feet in height, with a diameter of from 15 to 24 inches. In the Middle States a height of 60 feet and a diameter of 2½ feet is often attained. The best development, however, is made on moist residual soil of the upper slopes of the southern Alleghenies, where a height of 90 feet and a diameter of 4 feet are not uncommon. The root system is extensive, especially on dry, sterile soil, where the taproot goes deep in search of moisture. Numerous surface roots are also developed.

RANGE.

The black cherry is common throughout the eastern half of the United States. The natural range is from Nova Scotia to Florida, west to Texas, and north through Indian Territory, the eastern portions of Kansas, Nebraska, and South Dakota. In the northern part of the Lake States its distribution is confined to shaded lake shores and banks of streams.

The trees associated with the black cherry include many of the common hardwoods, such as the beech, birches, oaks, hickories, black walnut, and maples.

Although growing over a wide range of territory, the area for planting is, in general, limited to the region westward from Indiana to the eastern portions of South Dakota, Nebraska, and Kansas, and southward along the moist slopes of the Appalachians.

HABITS AND GROWTH.

The black cherry will grow fairly well on dry situations, but it is only in the moist, well-drained, rich soils of mild climates that the maximum development is reached. The tree thrives on bottom lands, yet makes a moderate growth on sandy or rocky upland if the soil is penetrable. In the Middle West it has had variable success as a forest tree, though on the whole the results have been encouraging. The tree can endure moderate shade.

The rate of growth is largely dependent upon climatic and soil conditions. Under the most favorable conditions it is a rapid-growing tree, while in the northern part of its range or in unfavorable soil the growth is rather slow. Under average conditions in eastern Nebraska a diameter of 6 inches and a height of 23 feet have been attained in ten years. However, it is not known how long this rate of growth may be maintained. In general, the black cherry in forest plantations may be considered as a rapid-growing, short-lived tree.

It has comparatively few enemies. The forest tent caterpillar often devours the foliage, and a bark beetle may sometimes kill the tree. A fungus known as "black knot" causes unsightly swellings on the branches and greatly disfigures the tree.

Injuries by insects should be reported to the Bureau of Entomology, United States Department of Agriculture.

ECONOMIC USES.

The wood is fairly light, strong, and hard, with a close, fine grain, which takes a beautiful polish. The mature tree has brown or red heartwood and yellow sapwood. The heartwood is the valuable portion of the tree and has been so extensively used in cabinetmaking and interior decorating that the supply of cherry timber is greatly reduced.

The black cherry is well adapted for mixed planting throughout the Middle West. It serves a useful purpose as a nurse tree in forest plantations and where luxuriant foliage is desired. In the region of its best development it does not hold a high place, because of the presence of more valuable species. In general, however, it is too short lived and of too limited economic value to be recommended for extensive planting.

METHODS OF PROPAGATION.

Black cherry reproduces itself by seed and sprouts. Seed is borne abundantly every year and furnishes the better method of propagation. It ripens in late August or early September and may be collected by hand from trees growing in the open. After the pulp has been removed by crushing, the pits should be stratified in moist sand for the winter. Since the seedlings are easily transplanted, it is better to raise nursery stock of this species than to attempt direct seeding on the planting site. In the spring the seeds should be planted 2 to 3 inches apart, in drills 8 to 12 inches apart for hand cultivation or 2 to 3 feet apart for horse cultivation. The seed should not be covered more than 1 inch and should always be planted immediately after they are removed from the sand, because even a partial drying at this stage is fatal.

PLANTING.

The transfer to the permanent site may be made in the spring, when the trees are 1 year old. They will then have a height of from 8 to 12 inches. A desirable spacing is 4 feet by 6 feet or 6 feet each way. The tree, however, is better adapted for mixed than for pure planting. In a mixture the best species for planting with the black cherry are boxelder, green ash, white ash, silver maple, and black walnut.

CULTIVATION AND CARE.

Frequent and thorough cultivation is essential for two or three years. If cultivation is neglected, weeds and grass will thrive to the detriment of the plantation. When the trees become very much crowded, thinnings should be made in order to give the best trees ample space for development.

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